REMARKS

In response to the Office Action mailed March 20, 2007, claim 15 has been canceled without prejudice, claims 11, 16, and 26 have been amended and new claims 31-47 have been added. Accordingly, claims 11-14 and 16-47 are currently pending with claim 13 withdrawn from further consideration.

Support for the present amendments may be found throughout the original disclosure. For example, the amendments to claims 11, 16, and 26 are supported in the specification, e.g., in paragraphs [0011], [0051], [0065]-[0067], [0070] and [0081-0087], in original claim 6, and in the drawings, e.g., in FIGS. 1, 26, 27, and 44-47. New independent claims 31 and 42 are supported throughout the specification, e.g., in the paragraphs identified above, in the original claims, and in the drawings identified above. New claims 32-34 are supported, e.g., in paragraph [0070]; claims 35-38 and 43-45 are supported, e.g., in paragraphs [0081]-[0088], and in FIGS. 44-47; and claims 39-41, 46, and 47are supported, e.g., in paragraphs [0049] and [0072]. No new matter has been introduced.

In addition, paragraphs [0067], [0072, and [0080] have been amended to correct obvious typographical errors.

In the Office Action, claim 16 was objected to, claims 11, 12, 15-17, 19-22, and 24 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Publication No. 2005/0107871 ("the Realyvasquez et al. reference"), and claims 11 and 14 were rejected either under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,485,816 ("the Krumme reference"). Finally, claims 26, 27, 29, and 30 were rejected under 35 U.S.C. § 103(a) as unpatentable over the Realyvasquez et al. reference in view of U.S. Patent No. 5,716,370 ("the Williamson et al. '370 reference"), and claims 23 and 28 were rejected under 35 U.S.C. § 103(a) as unpatentable over the Realyvasquez et al. reference in view of the Williamson et al. '370 reference, and further in view of U.S. Patent No. 4,705,516 ("the Barone et al. reference"), claim 18 was rejected under 35 U.S.C. § 103(a) as unpatentable over the Realyvasquez et al. reference, and claim 25 was rejected under 35 U.S.C. § 103(a) as unpatentable over the Realyvasquez et al. reference in view of U.S. Patent No. 6,162,233 ("the Williamson et al. '233 reference").

Because none of the cited references, either alone or in combination, discloses, teaches, or suggests the subject matter of the present claims, the rejections should be withdrawn.

Turning first to the objection to claim 16, claims 16 and 26 have been amended to correct an obvious typographical error, replacing "related state" with "relaxed state."

With respect to the rejections based on the Realyvasquez et al. reference, a clip delivery apparatus is disclosed for simultaneously ejecting fasteners through a prosthesis and securing the prosthesis to a patient's existing valve. Paragraph [0042]. The fasteners are clips that are positioned in the clip delivery apparatus in an open, deformed configuration, i.e., by loading the clip into guide tubes 212 that restrain the clips in the open configuration. Paragraph [0050]. During use, a prosthesis is secured to the delivery apparatus, the delivery apparatus is seated on the valve annulus, and a plunger or knob 410 is pressed downwardly to move a first member 402 and ring 406 downwardly to effectuate simultaneous ejection of all of the clips from the clip delivery apparatus with a single stroke or actuation step. Paragraph [0057].

Turning to the present claims, claim 11 recites a method of attaching a first mass to a second mass using an attachment device comprising a base having a base axis, a first end and a second end, a first leg extending from the first end of the base, and a second leg extending from the second end of the base that includes holding the attachment device with a tool in a first configuration wherein the legs cross one another, rotating the base about the base axis with the tool to force the attachment device into a second configuration wherein the legs splay apart to define a U-shape, inserting the legs of the attachment device into the first mass and the second mass with the attachment device in the second configuration; and releasing the attachment device from the tool whereupon the attachment device returns towards the first configuration to attach the first mass to the second mass.

The Realyvasquez et al. reference fails to disclose, teach, or suggest a tool that holds an attachment device in a first configuration ***wherein the legs cross one another***, as claimed. Instead, the Realyvasquez et al. delivery apparatus only holds clips in an open configuration, i.e., with legs held in separate guide tubes. Further, the Realyvasquez et al. reference does not disclose, teach, or suggest a tool that ***rotates*** a base of an attachment device about a base axis to force the attachment device into a second configuration wherein the legs splay apart to define a U-shape. Accordingly, claim 11 and its dependent claims are neither anticipated by nor otherwise obvious over the Realyvasquez et al. reference.

For similar reasons, claim 16 and its dependent claims are also neither anticipated by nor otherwise obvious over the Realyvasquez et al. reference. As explained above, the Realyvasquez et al. reference fails to disclose, teach, or suggest loading an attachment device into a tool with the attachment device in a relaxed state wherein the legs cross one another, as claimed.

Turning to claim 26, as explained above, the Realyvasquez et al. reference does not disclose, teach, or suggest a tool that carries an attachment devices in a relaxed state wherein the legs cross one another, as explained above. Further, the Realyvasquez et al. reference also fails to teach or suggest anything about delivering multiple component heart valve assemblies. Instead, the Realyvasquez et al. reference merely discloses a clip delivery apparatus that simultaneously delivers several clips already loaded through a skirt of a prosthetic valve leaflet to secure the leaflet to an existing valve.

The Williamson et al. '370 reference cannot be properly combined with the Realyvasquez et al. reference. For example, the configuration of the disclosed tools are incompatible with one another, e.g., because the Realyvasquez et al. apparatus orients the clips downwardly for attachment to an existing leaflet, while the Williamson et al. apparatus orients the staples radially outwardly. In particular, if the Williamson et al. sewing cuff were loaded onto the clip apparatus of the Realyvasquez et al. reference, the clips would be oriented in a direction that would not allow the sewing cuff to be secured within a tissue annulus. Further, even if the clips were oriented radially outwardly, the result would be exposed tips that could seriously damage surrounding tissue during introduction into a tissue annulus. Thus, a person of ordinary skill would not consider combining these references.

Further, even if somehow combined, the Williamson et al. '370 reference also fails to disclose, teach, or suggest a tool that carries an attachment devices in a relaxed state wherein the legs cross one another, a feature that is wholly absent from the Realyvasquez et al reference. Instead, the Williamson et al. ‘370 reference discloses staples that are loaded in an open configuration into a tool T between an anvil and driver (col. 13, lines 63-66, FIG. 13), and, during delivery, the driver forces the fastener through a cuff and adjacent tissue and against the anvil to form the staple such that the legs overlap (col. 13, lines 57-59, FIG. 11). Further, neither of these references teaches, or suggests tools that can deliver individual clips, but instead discloses apparatus for simultaneously delivering multiple clips (see FIGS. 11-16 of the Williamson et al. 370 reference). Accordingly, claim 26 and its dependent claims are not obvious over the Realyvasquez et al. and Williamson et al. ‘370 references.

For similar reasons, new claim 31 and its dependent claims are also neither anticipated by nor otherwise obvious over the Realyvasquez et al. and Williamson et al. ‘370 references. Further, neither of these references discloses, teaches, or suggests a tool that includes an anvil around which an attachment device is loaded with the legs crossing each other, nor a slide and anvil that causes legs of the attachment device to rotate outwardly to a delivery state, as recited in claims 35 and 36. Finally, neither of these reference teaches or suggests removing and/or redeploying an attachment device, as recited in claims 40 and 41. In particular, the Williamson et al. staples cannot be removed without plastically deforming the staple again, which would risk damaging the prosthesis and/or tissue of the patient.

For similar reasons, claim 42 and its dependent claims are neither anticipated by nor obvious over the Realyvasquez et al. and Williamson et al. 370 references.

Turning to the Krumme reference, a shape memory staple is disclosed that includes pointed tip portions 13 that are initially spaced relatively far apart from one another. Col. 3, lines 28-35; FIG. 1a. During delivery, the staple undergoes a change in shape due to application of heat, thereby causing the tip portions to move closer to one another to close a suture breach. Col. 3, lines 37-56, FIG. 1b. Thus, the Krumme device fails to disclose, teach, or suggest holding an attachment device with a tool in a configuration wherein legs of the device cross one another, nor rotating a base of the device to force the device to a configuration wherein the legs splay apart, as recited in claim 11. In fact, the tips of the Krumme staple never cross one another. Therefore, neither claim 11 nor any of the other present claims are anticipated by nor otherwise obvious over the Krumme reference.

Finally, the remaining references, i.e., the Barone and Williamson et al. '233 references, even if they could be properly combined with the other cited references (which Applicants do not concede) also fail to disclose, teach, or suggest the features discussed above that are wholly absent from the other cited references. Accordingly, the present claims are neither anticipated by nor obvious over the cited references.

///

///

///

///

In view of the foregoing, it is submitted that the claims now presented in this application define patentable subject matter over the cited prior art. Accordingly, reconsideration and allowance of the application is requested.

Respectfully submitted,

VISTA IP LAW GROUP LLP

Date: June 20, 2007 By ______________________

William A. English
Reg. No. 42,515
Attorneys for Applicants

2040 Main Street, 9th Floor
Irvine, CA 92614
Telephone: (562) 665-3953
Facsimile: (949) 625-8955